

TABLE OF CONTENTS

	page
Executive Summary	i
I. Chapter 1 Iowa's Water Resources	1
II. Chapter 2 Impacts of Nonpoint Source Pollution	5
A. Agriculture	6
B. Atmospheric Deposition	8
C. On-site Residential Wastewater Disposal	8
D. Waste Disposal	8
E. Urban Runoff/stormwater Discharges	9
III. Chapter 3 Iowa's Nonpoint Source Management Program	10
A. State and Federal Agencies	
1. Iowa Department of Natural Resources	
a. Section 319	11
b. Section 401 Water Quality Certification	15
c. Total Maximum Daily Loads	15
d. Combined Sewer Overflows	16
e. Agricultural Drainage Wells	16
f. Animal Feeding Operations	17
g. Floodplain Management	17
h. Household Hazardous Material	18
i. IOWATER	19
j. Landfill Regulation	19
k. On-site Wastewater Treatment	20
l. Protected Wetlands	21
m. Protected Water Areas	22
n. State Comprehensive Outdoor Recreation Plan	23
o. Sewage Sludge Regulations	23
p. Storm Water Discharges	24
q. Source Water Assessment and Protection	25
r. Property Tax Incentive	26
s. Streambank Stabilization & Habitat Improvement	26
t. Sport Fish Restoration Funds	27

u.	Contaminated Site Program	27
v.	Water Quality Standards	28
w.	Resource Enhancement and Protection	30
2.	Iowa Department of Agriculture and Land Stewardship	30
a.	Water Quality Protection Projects	30
b.	Agricultural Drainage Wells	31
c.	Construction Site Runoff	31
d.	Fertilizers	32
e.	Iowa Watershed Protection Program	33
f.	Iowa Financial Incentive Program	33
g.	No-Interest Soil Conservation Loan Program	34
h.	Organic Agriculture	34
i.	Pesticides	34
j.	Soil and Water Conservation Districts	35
k.	Wetlands and Riparian Areas	35
3.	United States Department of Agriculture	36
a.	EQIP	37
b.	Conservation Reserve Program	38
c.	Conservation Technical Assistance	39
d.	Resource Conservation & Development	39
e.	Wetlands Reserve Program	40
f.	Wildlife Habitat Incentive Program	40
g.	Little Sioux Flood Prevention Project	40
h.	Watershed Protection and Flood Protection	41
i.	Emergency Conservation Program	42
j.	Emergency Watershed Protection Program	42
k.	Other USDA Farm Programs	42
4.	University of Iowa Hygienic Laboratory	44
5.	Iowa State University Extension	44
a.	Manure Management	44
b.	Manure Applicator Certification	45
c.	IMMAG	45
d.	Maquoketa River Monitoring	46
e.	Information and Education Programs	46
f.	USDA Water Quality Program	48
i.	Nonpoint Source Hydrologic Unit Areas	48
ii.	Northeast Iowa Demonstration Project	49

6.	Leopold Center for Sustainable Agriculture	49
7.	United States Geological Survey – Atmospheric Deposition	50
B.	Agricultural Organizations	51
1.	National Corn Growers Association	51
2.	Iowa Cattelman's Association	51
3.	National Pork Producers Council	52
4.	Iowa Soybean Association	52
5.	Iowa Farm Bureau Federation	53
C.	Environmental Organizations	55
1.	Iowa Environmental Council	55
2.	Izaak Walton League	56
3.	Iowa Natural Heritage Foundation	56
4.	Sierra Club	57
5.	Trees Forever	57
D.	Sportmen's Organizations	58
1.	Ducks Unlimited	58
2.	Pheasants Forever	59
IV.	Chapter 4	
	Nine Key Elements	60
A.	Watersheds and Water Quality Projects	62
B.	TMDLs	65
C.	Nutrient Criteria/Standards	67
D.	Animal Feeding Operations	70
E.	Stormwater Program	71
F.	On-Site Wastewater Treatment Disposal	73
G.	Buffers and Wetlands	75
H.	Water Quality Monitoring	76
I.	Source Water Protection	77
J.	Key Element #1 – Goals	78
K.	Key Element #2 – Partners	90
L.	Key Element #3 – Balance	94
M.	Key Element #4 – Abate/Prevent	99
N.	Key Element #5 – Impacted Waters	101
O.	Key Element #6 – Program Approach	105
P.	Key Element #7 – Federal Consistency	107
Q.	Key Element #8 – Program Management	110

R. Key Element #9 – Evaluation, Review and Revision	112
---	-----

Appendices

1 – Tracking of Project Activities	114
2 – Priority Waterbodies	115
3 – Unified Watershed Assessment	117
4 – Application Procedures and WRAS	175
5 – Listing of Section 319 Projects	193
6 – Project Summary Example	198
7 – 305(b) Report Summary	200
8 – Iowa's 1998 303(d) List of Waters	203
9 – Priority Lakes	208
10 – Priority Streams	209
11 – Federal Lands	210
12 – Project Implementation Plan	211
13 – Budget Tracking	220
14 – Project Directory	221